stability over the past decade. Shifts in traffic volumes, where they have occurred, were generally directly associated with land developments such as The Galleria. While locally significant, these trips are quickly absorbed into the travel stream and do not represent a regionally significant increase in traffic volumes.

Traffic Constraints on a community system of streets and highways, most frequently occur at intersections. As a result, the capacity of street is largely defined by the capacity available at key intersections. Exceptions to this generality would consist of unique features which limit capacity, such as a narrow bridge or a railroad crossing. Even in these situations, however, the impact to capacity is created by the need to accommodate conflicting vehicle movements, resulting in interruptions in traffic flow.

The 1985 Master Plan for Red Bank identified a number of intersections which were deemed critical from a traffic circulation perspective. There were five:

1) Maple Avenue, Broad Street and Newman Springs Road
2) Shrewsbury Avenue and Newman Springs Road
3) Broad Street and East Front Street
4) Riverside Avenue, Rector Place, and Bridge Avenue (the Cooper's Bridge area)
5) Maple Avenue, Riverside Avenue, Pearl Street and Front Street (the one-way loop of Rte. 35)

Not surprisingly, this list consists of most of the locations in Red Bank where east-west arterial streets cross north-south arterial streets. At these locations, relatively high flows of traffic must cross each other, resulting in increased levels of traffic delay. In addition, relatively high volumes of turning traffic flows between the crossing arterial streets, further complicating traffic operations. All of these critical intersections remain essential to the borough's traffic circulation system, and will continue to be critical in the future.

4. Parking

The parking requirements for the various land uses are uniform throughout town, but the means of providing those required spaces varies from use to use, and from location to location.

In the typical neighborhood residential areas, parking is simply in the driveway or the garage of the individual properties. In the higher density residential developments, and in the commercial/institutional areas, the parking is either on private lots, public lots, or multi-story garages. Some developments, such as The Galleria, the hotels, and the Hospital provide their own parking. Others, most notably the shops and businesses of the Broad St. area have shared public lots. These public lots are metered, while the on-street parking in that area is free.

The only parking garages in town now are located on Front St. and Riverside Ave.; one serves the hospital, and the others are located within the large apartment buildings facing the river. Future larger developments (especially along the river) will probably require the construction of additional parking structures.

Overnight parking is currently prohibited on all streets in town, in order to facilitate snow plowing and street cleaning.

Transportation Issues: A Summary

A new vision has evolved regarding what Red Bank could become, a vision which includes three circulation-related objectives: the expansion of both residential and commercial developments in ways that support walking, biking, and using public transportation; the greater unification of the eastern and western sections of the borough; and the assurance that Red Bank is primarily a pedestrian-friendly place, where the desirable way to get around town is to walk, or ride a bicycle.

As a result, the degree of vehicular delay at various intersections and on certain streets should not be the only criteria now used to determine whether the borough's transportation system is operating effectively. Increased revitalization efforts, the public's concern about the viability of pedestrian circulation within both Red Bank and New Jersey generally, the importance which the State Development and Redevelopment Plan has placed on regional and town centers, and the adoption of the Red Bank Vision Plan, have all served to demonstrate the importance of additional issues which should be considered when evaluating the effectiveness of the borough's circulation system. Among these additional issues are the following:

1. Land Use

Does the whole transportation system (i.e., walkers, bicycles, cars, buses, trains, trucks) support the proposed land use plan for the borough, not just in terms of capacity but also in terms of linking and providing meaning to the separate areas of the town so that a true center can evolve?

2. Pedestrians Along the Streets

Are streets being managed to protect and enhance the flow of pedestrians, especially along the major pedestrian streets?

3. Barriers to Pedestrian Use

What barriers exist to the flow of pedestrians in Red Bank, and what can be done to expedite pedestrian movements, especially to schools, businesses, churches, parks, the riverfront and the train station?

4. Vehicles in the Neighborhoods

Are vehicle movements being sufficiently well managed that through traffic is accommodated without creating a severe impact on adjoining neighborhoods?

5. A Clear Vehicular Pathway

Does the roadway system provide its users with a clear, friendly and unambiguous pathway so that drivers in Red Bank will understand where they should be going?

6. Gateways

Do the major entry points into Red Bank serve as gateways to the borough, allowing visitors and residents alike to recognize that they have arrived in Red Bank?

These additional issues, in turn, suggest that there are a number of important circulation problems which should be addressed in future years. Some of the problems can be directly resolved in conjunction with private development efforts. Other problems will require public efforts to better define the problem, articulate potential solutions, evaluate benefits

and costs of potential solutions and then implement a desired improvement.

The following section highlights approaches which could be taken to address transportation problems in Red Bank and suggests certain specific actions which could be initiated to improve the quality of the total circulation system in the borough.

Circulation Proposals

1. Pedestrian Movement

The issues and objectives raised here are very clear: the pedestrian experience throughout the entire town must be pleasant, comfortable, and safe. Therefore a number of initiatives should be undertaken, which can be classified into three groups: new development planning, improvement to the public landscape, and changes to the roadway system.

Carefully Planned Development Actions are an essential part of making a community pedestrian system work. If new developments are located within the acceptable walking distances of other destinations, pedestrian use will be encouraged, traffic will be reduced, and parking demand will be less. For example: offices and other employment should be located within 1000' of restaurant and shopping areas (especially near the Broad St. area); higher density residential developments should be within about 1500' to 2000' of the train station, which is the maximum normal commuter walk; and hotels should be within about 2000' of restaurant and entertainment activities. In addition to these larger development objectives, the Monmouth County study for the train station area strongly recommended a "village of shops" that surrounds the station itself - an improvement that would be only a very short walk for the commuters. It must be clear that all these dimensions are based on long-standing studies of human behavior; location, as is well known in real estate, is everything.

Improvements to the Public Landscape, such as tree-lined sidewalks, with pedestrian scaled street lights, are an essential part of the whole effort to make the streets walkable. They are especially important on the major walking streets: Broad St., the central shopping area; Front St., which is the pedestrian gateway to the river in downtown; Riverside Ave., the location of the large hotels and a center of the tourism business; Monmouth St., which not only has a large shopping area, but also is the primary walk across town to the new borough hall and the train station; Shrewsbury Ave., the neighborhood business district;, and the east-west neighborhood streets of Chestnut, Oakland, and Bergen.

Walking connections to the river must be created, especially at Broad St., at Riverside Gardens, from Riverside Ave. to the Riverwalk, and at the ends of the streets on the west side of town.

NJTransit has proposed to build a 900' long raised platform at the train station, and therefore close Oakland St., one of the few walkable east-west streets in the community. Therefore the clear recommendation of the Monmouth County train station study, to build a wide and open underpass that will connect the two sides of Oakland St., must be studied carefully. Without this pedestrian connection, the community will be even further divided into two distinct areas, and it will be, in particular, more difficult for children to take their east-west walks to school.

The use of bicycles should be encouraged; therefore certain key streets should be striped for bikeways along their sides. The east-west streets are especially important in serving this purpose.

Changes to the Street System are also necessary in an overall pedestrian system plan for Red Bank. Most of the changes focus on the ease of crossing certain streets, which now are limitations on the useful and pleasurable walks that the community now either takes, or wishes it could take. For example: as the river's edge becomes more accessible, it must become easier to cross both Front St. (which could have a narrower roadway and wider sidewalks) and Riverside Ave. (where new residential uses will occur, and where the hotels are); many people walk across Maple Ave.., including commuters and school children, so various traffic calming steps should be taken to make that crossing safer and easier; the pedestrian crossing at the Bridge Ave./ Monmouth St. intersection serves shoppers going to the Galleria and the antiques area, as well as commuters, and should be made more clear as the station rebuilding takes place.

In addition to these street changes, enforcement of existing pedestrian right-of-way laws can make a significant difference. By law in New Jersey a pedestrian crossing a street has the right-of-way at street intersections, whether or not a cross-walk is marked. Red Bank should vigorously enforce this law so that pedestrians can feel more confidant walking across streets, and so that drivers in Red Bank will think more carefully about the rights of pedestrians. Police can assist in this effort by serving as an example and stopping for any pedestrian seeking to cross a street, even those too hesitant to enter the street.

Finally, specific programs to assist pedestrians can be implemented in association with the New Jersey Division of Highway Safety. These could include classes for children and senior citizens, training for police, and signage and better cross-walk delineation at critical locations.

2. Transit

Red Bank has much to gain through enhanced use of its substantial public transportation resources. The following transit enhancement proposals are therefore recommended:

Train Service is provided on a regular basis from Red Bank to Newark, New York, and Hoboken, as well as to several southern coastal locations. Therefore Red Bank, in addition to having commuting service heading north, is also a stop for people from the New York/north New Jersey region who are heading south to the shore communities. In providing this service, NJ Transit is currently developing plans to provide high level platforms at stations along the Jersey Coast Line. The platforms will enhance rail access and permit compliance with the Americans with Disabilities Act (ADA). The platforms will also reduce the length of time trains must dwell at each station, enhancing rail service and reducing the interference created at crossings.

As part of its proposal for Red Bank, NJ Transit plans to construct a 900' long platform, which will close Oakland Street. As the Monmouth County study indicated, this must be looked upon by the town as an opportunity rather than a problem. The new platform, a fully renovated historic station building, and the re-landscaping and reorganization of the adjacent bus area and

parking lot, can create a new active center in town. The high level platforms themselves can be designed, with landscaping and with shelters that are compatible with the character and pedestrian movement in town, to be new gateways to Red Bank - rather than the usual utilitarian structures seen at many commuter stations. And, as stated above, an underpass at the ends of Oakland St. will recreate the walking connection across town; it will also greatly simplify the commuters' walks to their parked cars on the other side of the tracks.

When this area is designed well, it will make rail use more attractive to the citizens of Red Bank, will create value in the properties and businesses in the area, and will make the walk across town more interesting and safe.

The local Bus Service focuses on the train station as a hub, and Red Bank's businesses and employers can take better advantage of being at this hub if certain NJTransit routing and management systems are reconsidered. Bus schedules, for instance, could be adjusted so that they serve to provide greater intra-borough service. Bus access to the rail station could be enhanced. Service could be extended to coordinate with peak rail travel times, and bus schedules could be adjusted to coordinate with train schedules, especially for buses to Fair Haven/Rumson area and buses serving Red Bank neighborhoods. Comfortable and pleasant waiting shelters could be located at key points throughout town.

Because Red Bank is a local transit hub, most of the bus lines terminate within the downtown. As a result, buses "lay-over" for a period of time — usually less than 15 minutes — so that drivers can be provided with a brief break from driving and so that a late bus can start on time for the next run. Ideally, bus "lay-overs" should occur at a location out of the traffic stream and at a location where the drivers can take advantage of services such as restaurants, rest rooms and telephones.

Currently, at least one bus route involves a "lay-over" on Front Street at the intersection with Broad Street. This location results in sight distance problems, and blocks the eastbound right turn lane from eastbound Front Street onto Broad Street, and is disruptive of the whole pedestrian experience in that area. The long dwell time of the bus at that intersection creates a bad image for NJ TRANSIT. NJ TRANSIT should be encouraged to eliminate bus lay-overs at this and other congested locations (for the comfort of both pedestrians and vehicles) and instead locate them at appropriate "terminal" locations such as the train station or hospital.

3. Traffic

The traffic management initiatives recommended here will better control traffic on Red Bank's streets to help assure that cars will help to serve the borough rather than hurt it. These initiatives are, very importantly, also associated with the efforts which can help to improve the flow of pedestrians throughout town.

Route 35: Route 35 is the principal pathway which both residents and visitors use to enter the borough and pass through it. As a result, it is of critical importance because it affects how Red Bank is perceived by both residents and visitors. In addition, since it passes the length of the borough from north to south, it impacts on numerous neighborhoods and has the potential of becoming a major barrier dividing the borough.

Because of the importance of Route 35, it is especially important that the roadway provide drivers with a clear, friendly and unambiguous pathway so that drivers in Red Bank can feel assured that they know where they are going. Unfortunately, largely because of the turns the highway makes in the borough, that is not the case. As a result, it would be desirable as part of the borough's continuing evaluation of development and transportation options, to identify methods by which this pathway can be improved to become more legible to the motorist. The three primary intersections which need further study (Cooper's Bridge, Riverside/Maple, Broad/Newman Springs) are described in detail below. At the same time, it is important that any improvements to the Route 35 corridor also serve to enhance the borough's development opportunities, and to improve pedestrian movement in the borough; this is especially true of Riverside Ave. and Maple Ave., which are also described below.

Since Route 35 is a state highway, one means of further defining the types of improvements which should be implemented would be to conduct a "State Highway Access Management Plan", in cooperation with the Department of Transportation. Access Management Plans provide a specific mechanism by which the New Jersey Department of Transportation, Monmouth County and the Borough of Red Bank can cooperate in identifying needed improvements and in managing the roadway, including the use of adjoining properties.

The Cooper's Bridge/Riverside Avenue/ Bridge Avenue/Rector Place Intersection is a combination of highway-oriented retail activities, a confusing street layout, and building vacancies that have created an impression of a no-man's land at this gateway into Red Bank. While the intersection of the street appears to operate efficiently in terms of leading traffic onto Cooper's Bridge and in receiving traffic from the bridge, it also serves to effectively block the movement of east-west traffic and pedestrians between Riverside Avenue and Rector Place.

An important objective of the new vision for Red Bank is to link the east and west sections of the town and to take better advantage of the development opportunities associated with waterfront development along the Navesink River. This would argue that this critical intersection should also serve to link the eastern and western waterfronts of Red Bank together. Accomplishing this objective while also serving the importance traffic functions created by Cooper's Bridge obviously is a difficult task which will require substantial study.

Because of the number of vacant properties at this gateway location, because transportation improvements could help to guide land development decisions here and along Rector Place, and because land developments should be implemented in a fashion which would support both traffic conditions and pedestrian movement at the intersection, it is important that a detailed plan for the area be carefully defined.

Riverside Avenue: provides access to some of the borough's most important riverfront developments, especially to its hotels and tourist business. It is important therefore that this Avenue be able to effectively provide easy automobile access to the major developments in the corridor, and also provide pedestrian connections between the different buildings and to the commercial center of Red Bank along Broad Street.

Minor improvements to street alignment combined with improvements in terms of sidewalks and street trees would serve to enhance the character of the street to accomplish these objectives. A detailed urban design analysis of the street would be desirable in order to identify potential methods of accomplishing these goals. Many of the improvements, for instance, could result from design guidelines created to guide private development along the Avenue.

The Riverside Avenue/Front St./Pearl St./ Maple Ave. Intersection is the center of the borough's vehicle street system, and marks the crossing of its most important east-west arterial with its most important north-south arterial. It is also extremely close to the traditional center of the borough.

From a pedestrian and land use perspective, the intersection and its current operation presents a challenge because of the volume of traffic, the extensive number of turning movements and the poor pedestrian quality of adjoining land uses. The transition from Riverside Avenue to Front Street, a transition defined by the Navesink River, currently is not reflected in the street network. If tourist and residential development along Riverside Avenue is to be linked to businesses located at Broad and Front Streets, it is important from an urban design perspective that this corner be better turned.

Property north and south of Front Street is currently being acquired as part of redevelopment efforts, or is recently developed. Therefore, a window of opportunity is available to define an appropriate urban design for this critical street crossing which would provide an improved pedestrian environment, enhanced land development opportunities and a better defined pathway for drivers. A high priority should be placed on developing detailed public improvement plans for this area which would both enhance riverfront development opportunities and create a better traffic pattern.

Maple Ave. is often so congested with traffic (especially at rush hour) that the flow of vehicles is slowed considerably, and that it is very difficult for pedestrians to cross. It is, in many ways, as much a barrier to east-west community connections as the train tracks. Therefore, a series of traffic-calming steps should be taken that assure an appropriate smooth flow of traffic, but even more importantly makes it easy for pedestrians and bicyclists to cross.

The Broad St./Maple Ave./Newman Springs Rd. Intersection is the gateway to Red Bank from the south, and confronts drivers with a number of decisions in a very short distance: the juncture of Maple Avenue and Broad Street, the intersection of Route 35 with Newman Springs Road, and the at-grade crossing of the NJ TRANSIT rail line. The result is an intersection with competing traffic control requirements which limit the ability to provide effective signage to guide drivers. The complexity of traffic patterns in this area is greatly increased whenever trains cross, which they must frequently do during the morning and evening peak periods. Because of the number of conflict points, an extensive traffic cycle length is required, and substantial delay is experienced by drivers before the back-ups created by a train crossing can be cleared.

The complexity of conditions and the poor signage at this important gateway location are anything but friendly and clear. For visitors arriving on Newman Springs Road or Route 35, little information or indication of

the way to Red Bank is provided. The issue therefore for arriving traffic is the issue of providing a clearer and more welcoming gateway.

Therefore, because the traffic flow is not easily changed, a study should be undertaken that proposes an overall system of signage locations, designs, and guidelines for both public and private signs, and landscape improvements on both public and private properties, all of which will help considerably to give order and clarity to the confusion.

Shrewsbury Avenue is one of Red Bank's major north-south arterial streets. It is an important street both in terms of carrying through traffic, and in terms of serving this neighborhood pedestrian-oriented shopping district . These two functions can be compatible with each other provided that traffic flow on Shrewsbury Avenue is effectively managed. Traffic calming measures would help motorists understand that they are passing through a neighborhood which should be respected, which is a walkable place, and which includes school children along and across it.

Therefore, it is important to maintain the existing street trees and plant additional trees where gaps in the canopy exist. More on-street parking should be provided, cross-walks at intersections should be clearly marked, and pedestrian right-of-way laws should be vigorously enforced. The details of the street and sidewalks - the street lights and the many public and private signs - should also be studied: there is little relationship of the existing business signs to the pedestrian, and the small yellow street lights are of a color and dimness that creates a sense of darkness and does not make the night time walk pleasant.

Leighton Avenue is a relatively wide, residential collector street which runs parallel to Shrewsbury Avenue, and which serves the elementary school as well as the neighborhood. Residents along the street have complained about the volume and speed of traffic on the street, which results when drivers use it to avoid Shrewsbury Avenue and the traffic signal at Newman Springs Road. Our observations indicate that traffic calming measures on this street are needed to protect the quality of the residential neighborhood, but that the measures do not have to be extensive. The number of vehicles using the roadway is not high and while some may drive at high speeds, most vehicles appear to drive at speeds appropriate for a residential street.

One effective measure that has already been taken is the prohibition of through truck traffic; others that could be considered are a prohibition of left turns from Newman Springs Rd., even slower speed limits, and the prohibition of all through traffic. Obviously any measure must be studied carefully, and coordinated with NJDOT.

The East-west pedestrian streets of Front, Monmouth, and Chestnut Streets and Bergen Place need to be enhanced with cross walks, bike lanes, and street trees, and comfortable and attractive paving, as east-west pedestrian streets. In addition, if Oakland St. remains a through walk (see the discussion of the train underpass, above), it should be improved in the same way. Land development should be therefore be encouraged to enhance the pedestrian quality of their sidewalks, and all off-street parking should be located in rear or side lots.

The Bridge/Monmouth intersection is difficult for both pedestrians and vehicles to cross. The wide expanse of street, the inclusion of the train tracks and the their crossing gates, and no stop sign on Bridge Ave. all make the area a real deterrent to east-west town connections. Not only is local vehicle traffic delayed considerably, it is also very difficult for commuters and other pedestrians to walk from the train station area to the Galleria and antiques shopping area.

Currently there are no street or pedestrian crossings of the NJ Transit rail line between Chestnut Street and Bergen Place. This three-eights of a mile gap in an urban environment creates a substantial barrier, helping to divide the east and west sides of the borough. In addition, NJ Transit currently plans to also close the existing at-grade crossing at Oakland Street as part of providing high level platforms at the railroad station. Thus, provision of the new pedestrian underpass at this location, which was recommended in the Monmouth County train station study and which was describe above, becomes even more important.

4. Parking:

The storage of cars can have as much effect on the quality of life in town as their flow and movement. Therefore parking strategies are an essential part of a master plan, and must relate not only to the street system but to the pedestrian movement system, to public transportation, and to the various land uses throughout the community. Because the parking requirements must remain the same for the different land uses, certain policies toward the methods of meeting those requirements are necessary to be compatible with the differences in the various areas of town.

Examples of these strategies can include, for example, a change to current policy that would generally permit overnight parking. The presence of parked cars on the streets is far more pedestrian-friendly in that they act as barriers between the walker and the moving car, and that they narrow the perceived roadway and slow traffic down somewhat. The only prohibition on overnight parking might occur during winter months, during snow emergencies, and certain street cleaning days.

An effective parking strategy that could take place in the future is in the major shopping areas, where consideration could be given for the management of the parking lots by a merchant-supported validation system, and thus provide free parking for shoppers. At the same time, the addition of on-street parking meters could be used to assure the continual availability of short-term spaces for other shoppers.

Currently the parking arrangements for shoppers vary considerably from location to location, so a study should be undertaken to evaluate the various issues discussed here, and to raise and understand others. The objective should be to have a parking system that is supportive of the walking environment, and which is efficient and economical for both the businesses and the government of the community.

Conclusion

The recommendations of this plan indicate an expansion of downtown, the development of a new neighborhood west of Maple Ave. near downtown, a unique pattern of development along the river, and the special identification of the Shrewsbury Ave. business area. These plans will result in the need to make more

comfortable connections between the new developments that will occur, between the various areas of town, and between public transportation and the entire community. It indicates further that there are several overriding circulation goals: to reinforce the fundamental pedestrian quality of the town, to connect the two sides of town, to make the connections to the river easy and comfortable for everyone, to make public transportation more convenient, and to overlay all of these goals with the need to make a smooth flow of traffic on the principal through streets of the community.

COMMUNITY FACILITIES PLAN

Introduction

As stated in previous Master Plans, the Community Facilities Plan Element is concerned with all governmental functions and related facilities necessary to meet the safety, health, educational, cultural and general welfare needs of present and future Borough residents.

Summary

This Plan has concluded that most of the Borough community facilities are in a current state of change. For example: the Borough's administrative facilities, including municipal offices, police, and senior citizens center, will be renovated or relocated within the life of this Master Plan; the schools may need some consideration for renovation or expansion of existing facilities in order to address state mandated programs or local program desires; the Emergency Services and Public Works departments appear to be adequate for life of this Master Plan (six years from adoption of this document).

Existing Community Facilities

Educational Facilities

The Primary School, located on River Street and Locust Place, was constructed in 1971 on a 19.7 acre parcel deeded to the Board of Education by the Borough for $1.00. The building serves grades kindergarten through 4, even though it was designed for K to 3, originally. A Gymnasium was added in 1972. Since the pre-vious Plan, the building has had the roof replaced, a new Geothermal heating and cooling system installed, and a classroom has been converted for use of instruction for English as a Second Language. The space allocations in the school are as follows:

4 Kindergartens
24 Classrooms
1 Art room
1 Music/science room
1 Library
1 Gymnasium
1 Teacher work rm.
1 Compensatory education room
1 Music room
1 Title I room
1 Nurse's office
1 Faculty lounge
1 Principal's office
1 Vice-principal's office

1 Auditeria (cafeteria and assembly)
5 Special services offices, conference and work spaces

The functional capacity of the school as of the last revision of the educational facilities Master Plan (1978) under the Board of Education was 690.

The Middle School is located on 6.9 acres off of Harding Road. It was built in 1917 as a high school, with three separate additions over it's life, and converted to use as a middle school in 1978. The latest addition was in 1959, including the gymnasium. The school, with 39 classrooms, serves grades 5 through 8 plus special education. There are 35 1/2 teachers, 2 administrators, and 8 maintenance staff. Sixty off street parking spaces are provided for staff and visitors.

The outdoor recreational facilities consist of areas for softball, basketball and volleyball plus paved play areas. Since the last plan, the Industrial Arts classrooms have been converted to classrooms and a new window replacement program has begun.The functional capacity as of 1978 was 809 students.

According to the District's 1990 Long Range

Facility Plan, both schools were short of space for carrying out their educational programs. The Red Bank Primary School was short of a music classroom, regular classrooms, and early childhood classrooms. The Red Bank Middle School was short of suitable space for guidance. The outside recreation facilities are inadequate due to a lack of playground equipment and developed play areas. The site for the Middle School is inadequate in size based on standards by the State Department of Education for a middle school. The recommended area was 26 acres. In addition, the middle school space layout is contrary to the "team" teaching concepts required for several programs. This may necessitate future rearrangement or replacement of existing spaces.

The site constraint issues of the middle school should be examined for specific proposals to address the program necessities. These proposals should be evaluated in a coordinated manner with both the Board of Education and the Borough for other community facility needs. After grade 8, Borough public school students attend Red Bank Regional High School located in Little Silver.

Local School Enrollment

Unlike the statistics of the previous Master Plan, the school District's figures indicate an increase in student population from the time of that plan and going forward into the future. While this increase has not posed a significant constraint on the District's programs to date, this may need to be addressed in future school planning.

The School District's population and enrollment figures can be best summarized by the following quotation from their Demographic Studies and Enrollment Projections Report dated March 1994 (not yet adopted as of this date). "The median age of the population increased by .72 years over the period, and the age 65 & over declined by 300 persons. Such changes tend to be associated with increased turnover of housing to younger families with children. Nonetheless, the number of persons under 20 years of age declined substantially -- 704 persons, 25.58 percent. The decline was concentrated in the school age (5-19) population however; the Under-5 population actually increased by 19 persons, an increase of 3.24 percent.

The table (below) indicates that at that time, assuming no substantial in- or out-migration, the 1990 Under-5 group will become the 1995 age 5-9 group, increasing it by 155 persons, and the 1990 age 5-9 group will become the 1995 age 10-14 group, decreasing it by 34 persons. The net effect of these changes would be to increase the age 5-14 population by 121 persons, 12.9 percent. By the same reasoning, the table points to a slight decline at the high school level in 1995 when the 1990 age 15-19 population of 506 persons is replaced by the smaller 1990 age 10-14 population of 485 persons."

Net Resident Births, 1983-1993

Year		Net Births	Entrance year
1983		168	1988
1984		145	1989
1985		160	1990
1986		182	1991
1987		220	1992
1988		213	1993
1989	*	198	1994
1990	*	200	1995
1991	*	215	1996
1992	*	213	1997
1993	*	208	1998

* Provisional—Data Source: N.J. Department of Health; 1993 Estimated Birthday must be on or before October 1 for entrance in the indicated year.

Enrollments by School And Grade

	Primary		Middle
PreK	75		75
K	93		93
1	122		122
2	93		93
3	87		87
4	80		80
5		65	65
6		78	78
7		63	63
8		60	60
Sp Ed	26	5	31
Total	576	271	847

The enrollment in the district's schools as of October 15, 1995, totaled 847 pupils. The table, "Enrollments by School and Grade" above presents the district-wide and individual school enrolments by grade and for special education as of that date.

Grades K-8 and Special Education Enrollments 1991 To 1995

	1991	1992	1993	1994	1995
PreK	37	0	81	71	75
K	92	116	115	122	93
1	92	105	122	110	122
2	95	74	83	93	93
3	70	102	67	80	87
4	64	72	95	60	80
5	78	64	69	84	65
6	72	86	62	61	78
7	78	81	83	59	63
8	77	82	84	84	60
Sp Ed	59	41	43	31	31
Total	814	873	904	855	847

1993 & Projected 1994-2002 K-8 and Special education enrollments (4-YEAR Trend)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
PreK	81	75	75	80	80	80	80	80	80	80
K	115	93	93	115	115	115	115	115	115	115
1	122	122	122	96	119	119	119	119	119	119
2	83	93	93	98	77	95	95	95	95	95
3	67	80	87	91	95	75	92	92	92	92
4	95	60	80	84	87	91	72	89	89	89
5	69	84	65	78	81	84	89	70	86	86
6	62	61	78	63	75	79	82	86	68	84
7	83	59	63	79	64	77	80	84	88	69
8	84	84	60	65	82	66	79	83	86	90
Sp. ed	43	31	31	32	33	33	34	34	34	35
Total	904	855	847	879	908	914	937	946	952	954

1995 and Projected Average 1995-2002 K-8 Enrollments By School By Grade and Sp. Education (4-Yr. Trend)

		1995	1996-1997	1998-1999	2000-2002
Primary					
	PreK	85	80	80	80
	K	93	115	115	115
	1	122	108	119	119
	2	93	88	95	95
	3	87	93	84	92
	4	80	85	82	89
	Sp. ed	26	26	26	26
	Total	576	595	601	616
Middle					
	5	65	80	87	81
	6	78	69	80	79
	7	63	72	79	80
	8	60	74	73	86
	Sp. ed	5	6	7	8
	Total	271	301	381	334

Red Bank Regional High School

The Red Bank Regional High School District was formed in November 1969 by the voters of Red Bank, Little Silver and Shrewsbury. In December of 1971 voters of the district approved plans for a new high school on a 53.4 acre site in Little Silver. The first students attended the new facility during the 1975-1976 school year.

The building is in exceptional condition as the result of an annual maintenance and improvement program. The site has exterior physical education and interscholastic sports facilities including:

Field House	Football Stadium
Tennis Courts	Soccer Fields
Running Track	Baseball Fields
Field Hockey Field	

The school is a comprehensive high school with special programs in the Performing Arts and Vocational-Technical Education which attract additional tuition students from outside the regional high school district.

Regional School Enrollments

Enrollment is projected to be stable over the next five–year period. Since 1975 a number of changes in the building have resulted in a change in the functional capacity as calculated by the N.J. Department of Education Building Capacity Worksheet. Maximum capacity is calculated to be 1,583.

Red Bank Regional High School Enrollments

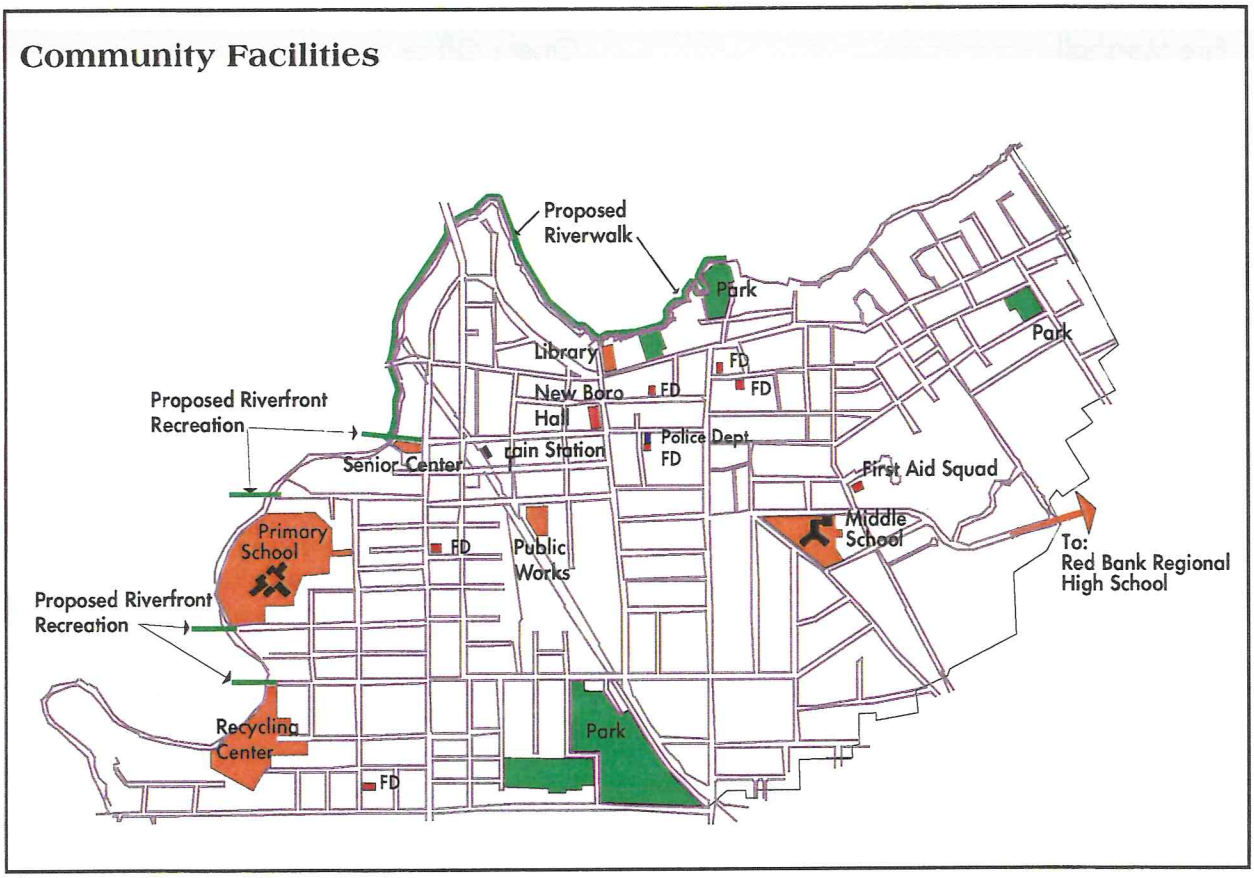
1989	1990	1991	1992	1993	1994
1,001	950	997	1,057	1,034	1,067

Source: Red Bank Regional High School

Red Bank Regional High School Enrollments (projected)

Yr:	95-96	96-97	97-98	98-99	99-00
Gd					
9	235	232	228	296	243
10	268	244	235	253	299
11	281	262	253	239	245
12	264	274	251	232	232
Total	1,048	1,012	967	1,020	1,019

Source: Red Bank Regional High School



Administrative, Police and Court Facilities

From 1992 to the present, a complete facilities evaluation has been in progress for the Borough. This evaluation and resulting reports have been fairly exhaustive in breadth and scope pertaining to all Administrative, Police, Court, Senior Citizen, and Public Works purposes. This Plan will not try to recreate the work done elsewhere, but will provide a synopsis of that report and it's conclusions.

Administrative Offices

The Borough municipal offices are planning to relocate from their present location at 32 Monmouth Street (gross square footage of 10,800 square feet) which was constructed in the early1920's as a center for telephone exchange equipment. The existing building contains approximately 7,000 usable (net) square feet and contain the following offices and/or departments:

Basement
Basic Storage and Building's Services
Parking Utility
Planning & Zoning Board of Adjustment
First Floor
Administration:
Borough Clerk
Administrator
Finance
Second Floor

Construction
Fire Marshall
Code Enforcement
Health & Public Records Department
Public Toilets
Storage
Third Floor
Welfare Department
Tax Assessor & Collection
Parks & Recreation
Council/Public Meeting Room

The report has indicated an expansion of the space needs of these departments of the Borough by a factor of one and one-half times their current usable area.

Police Headquarters

Red Bank Police Headquarters is currently located at 51 Monmouth Street and is shared with the Municipal Court facility, and the Borough Print Shop. The original structure was built over 75 years ago and was the first Township Hall for Old Shrewsbury Township. The building is currently listed on the National Register of Historic Places and the State of New Jersey Historic Register. The current uses for the Police functions in this building are as follows:

Lobby with public Seating
Communications & Dispatch Center
Roll Call/Training Room
Report Writing Room
Conference Room
Parking Authority
DWI Processing Room
Traffic Safety
Juvenile Bureau/Crime Prevention Bureau
Evidence Room
Records Division
Booking Room
Squad Room Administration
Shift Commander
Chief's Office
Cell Block Area (5 Cells Total)
Secretary to Chief's Office
Prisoner Processing
Deputy Chief's Office
Locker & Physical Fitness
Storage
Rest rooms
Parking for vehicles

The Police Department, itself, consists of: one Chief; one Deputy Chief; one Captain; three Lieutenants; eight Sergeants; three Detectives; twenty-two Patrolmen; five dispatchers; and two parking utility officers. In addition, the Department has one Special Officer; two Secretaries and one Clerk. With a police force of forty-five and a population of 10,500 (1990); the police protection force per 1,000 population is 4.5.

In terms of equipment, the Department has twenty-four cars. There is currently a routine replacement program.

The existing building and the site are very inadequate for police purposes. Parking is limited and unacceptable. The structure is in poor condition with major repairs required for future use including the roof, electric, and heating/cooling systems. As stated below, if the Police facilities are to be relocated, they must be adjacent to the Municipal Courts.

Municipal Court Facility

The Municipal Court presently occupies approximately 2,300 square feet of the Police Headquarters building; facilities include:

Courtroom
Court Clerk
Lawyers Room
Judges Chambers
Violations Clerk
Officers Waiting Rm.

The same deteriorated physical conditions of the building apply to the Court facilities as well. They are inadequate and in need of significant renovations, or of relocation. Due to the nature of the interactivity and operations of both Departments, it is recommended that the Court facility be relocated with the Police Department.

Public Utilities

The Department of Public Utilities is located on the one acre municipal water works parcel at 75 Chestnut Street. The site contains a complex of buildings (totaling approximately 15,000 SF) and storage areas including:

Two garages for storage
One mechanic's garage
One filter room
Administrative office space
Small equipment storage yard

The duties of the department include:

trash collection, road and sidewalk maintenance, all vehicular maintenance for the Borough, cleaning and maintenance of public buildings, municipal parking lot maintenance, water and sewer utility maintenance, shade tree installation, plus park and recreation maintenance. The department at the present time has 36 employees including six administrative employees and 30 public utilities workers made up of the following:

Water supply personnel
Sewage personnel (lift station)
Mechanics (for vehicle and building maintenance)
Janitors
Street sweeper
Sanitation personnel
Treatment plant operators
Utility meter readers
Park and recreation maintenance personnel

The equipment inventory for the department as of September 1992 included the following:

6 Dump trucks
5 Pickups
24 Special vehicles (including 1 backhoe, 1 sewer jet, 1 excavator, 5 front end loaders, 1 snow tractor, 1 high wire lift back, 1 street sweeper, 1 grader, 1 disc chipper, 4 sanitation trucks, 2 recycling trucks, 1 bucket truck, 1 Vac All, 2 freightliners, 1 flat bed)
2 Sedans
3 Vans

The Director of Public Works is currently reorganizing existing space and anticipates no additional space needs at this time.

In general, the facilities of the department are adequate but an additional floor has been suggested at this location, by the public utilities Director, to better accommodate the administrative aspects of the department.

Senior Citizens Center

The Borough has obtained property, is constructing a new Senior Center. The Red Bank Senior Citizen Center is presently located in a leased facility off Chestnut Street, adjacent to the Borough's Public Utilities operations. The Borough pays a monthly rental for use of the building, which contains 3,272 square feet.

The facility includes a large meeting/dining/activities room; a medium sized and two smaller rooms used for arts, crafts and educational purposes; an exercise equipment room; a senior employment/health clinic office; a

reception area/library; two administrative offices; a kitchen; and two storage areas. The Center employs three full-time and 6 part-time staff members.

The multi-purpose Senior Citizen Center has a twofold purpose: (1) to make growing old easier for area elderly by responding to their basic physiological and security needs, and (2) to enrich and make enjoyable their remaining years by offering opportunities for satisfying social and intellectual needs.

To accomplish it's goals, the center provides a location where seniors can socialize; recreate; expand their skills, knowledge, interests, and understanding; become informed of and utilize preventive, supportive, emergency and other personal services; find opportunities for useful paid and volunteer work, and improve their morale.

In addition to its various recreational, educational, crafts, and counseling activities, the Center hosts an active hot lunch program, health clinics, and meeting of local senior clubs. The Center is also a base for outreach programs servicing vulnerable homebound elderly.

Library

The Red Bank Public Library is located at 84 West Front Street. The original structure was built in 1856 with an addition constructed in 1967. The Library property is a long narrow rectangular lot sloping severely in the rear down to the Navesink River.

The facility has a Library Director and a staff of 8 full-time people. The total number of books is about 50,000 with a lending circulation of 75,000 presently available. The Library offers its customers access to the County Library collection through a State-organized Inter-library Loan System.

At present, the Library facility is adequate and no additional recommendations are required. There have been some improvements since the previous plan which include the repair/replacement of the roof, additional off-street parking, and outdoor reading areas adjacent to the waterside of the building.

Recycling Center

The Borough landfill is closed and responsibility for solid waste disposal is handled at the County level. The Borough has completed a new recycling center at the site of the old landfill. The operation of the new facility is described in the Conservation Plan element .

Emergency Services

Fire Protection

The Borough currently operates six private and Borough-owned fire stations. In general, the protection for the Borough is adequate. The Borough has a fire insurance rating of "Class 4" on a class system scale from 1 to 10 with Class 1 being the best rating and Class 10 the worst rating. Since the time of the last evaluation by the Insurance Services Office (ISO) in 1980, improvements have been made resulting in increased fire flow capacity and better Fire Department communications. The Fire Department has also implemented an annual hose testing program and has established a permanent training division. The Department responds to about 850 calls per year, or 2.33 calls per day.

A brief description of each station and its equipment is listed below:

1. Westside Fire Company (Leighton Avenue)

This station, the newest private company, was built in the early 1900's as a two-story brick structure. A 1 story cement block addition was constructed in 1969. The station, currently with a white stucco exterior, houses one engine. The station is generally in fair condition and is provided with a complete fire detection system.

Equipment:
One 1989 pumper rated at 1,500 gallons per minute which is in excellent condition. The company has approximately 1,000 feet of 5" hose; 1,500 feet of 3" hose; 700 feet of 2–1/2"; 1,100 feet of 1–3/4" and 300 feet of booster hose.

2. Union Fire Company (Shrewsbury Avenue)

This privately owned station is a two-story brick structure in good condition, however storage space is limited. Built in the early 1900's the station contains two bays. This station also is provided with a complete fire detection system.

Equipment:
One 1982 pumper engine in excellent condition and one 1988 utility truck belonging to the Fire Police (in excellent condition). The pumper has 1,700 feet of 3" hose; 1,000 feet of 2–1/2" hose; 1,350 feet of 1–3/4" hose; 200 feet of 1–1/2" hose, and 400 feet of booster hose.

3. Independent Fire Company (Mechanic Street)

The Borough-owned, antiquated, two-story brick building is in need of extensive general repair and does not have storage space for small equipment.

Equipment:
One 1972 pumper engine rated at 1,250 gallons per minute, which is in the process of being replaced with a 1994 Seagrave 1,500 gallon per minute pumper. The 1972 pumper carries 1,600 feet of 3" hose; 100 feet of 2–1/2"; and 1,900 feet of 1–3/4" hose.

4. Hook & Ladder Fire Company (Mechanic Street)

The two-story brick structure was built in 1882 with a one-story cement block addition constructed in 1964. The private facility is in good overall condition.

The building is provided with a complete fire sprinkler system, as well as complete fire detection system.

Equipment:
The building houses two ladder trucks. The first is a 1962 refurbished 100 foot steel aerial ladder in good condition. This apparatus requires two drivers to operate and is provided with a full complement of ground ladders. The second is a 1987, 100 foot Seagrave, rear–mount, aerial ladder in good condition, which also is provided with a full complement of ground ladders.

5. Relief Fire Company (Drummond Place)

This Borough-owned station is attached to Police Headquarters and is an old building unsuitable for this particular use.

Equipment:
One 1992 pumper engine in excellent condition, rated at 1,500 gallons per minute. The pumper carries approximately 1,600 feet of 3" hose; 1,200 feet of 2–1/2"; and 1,850 feet of 1–3/4" hose.

6. Liberty Fire Company (White Street)

This two-story Borough structure houses utility rooms including equipment storage and compressor apparatus for filling breathing tanks. The building is in poor condition and requires renovation.

Equipment:
One 1985 1,500 gallon per minute pumper in excellent condition. The company has 1,075 of 5" hose; 1,550 feet of 3" hose; 350 feet of 2 1/2"; 2,050 feet of 1–3/4" hose; and 200 feet of 1–1/2" hose.

7. First Aid Squad (Spring Street)

The First Aid Squad is a privately owned facility and was built in1959. The one-story colonial, brick structure is in good to excellent condition.

Equipment:
One 1994 rescue truck; one 1982 Chevrolet truck chassis ambulance; one 1979 Ford Scuba Team Vehicle; and one 1986 Ford ambulance all in good condition.

Parks and Recreational Spaces

The Parks and Recreation department is overseen by a full time director reporting to an eight-person committee appointed by the Borough Council. Their programs encompass all recreational aspects of life in Red Bank for all citizens. While the concentration has been on youth programs, there are some available for adults and for families together.

To better enhance the existing programs, a new program developer has been retained. The programs also involve the Police Athletic League for baseball, basketball, and scholarships. There is an annual "Fishing Derby" for ages up to 14, with an intended expansion to all age groups intended for next year. Some activities are also scheduled which do not use facilities in town. These activities include family outings to the beaches of Monmouth County and to sporting events.

The parks and recreational facilities currently cover various sites throughout the Borough. The current inventory of park spaces include:

- Count Basie Park: Active recreation- baseball fields, football field, track, basketball courts, batting cage beneath the stands of the football field, tot lot and fishing pond.
- Marine Park: Clay tennis court center, Passive recreation, tot lot, boat slips, and shuffle board courts.
- East Side Park: Active and passive recreation - basketball court, baseball field/soccer field, tot lot
- Public Library: Passive recreation/reading/ sitting area at open space to west of the library.

In addition, the Parks & Recreation Department works in cooperation with both the Board of Education and the Community YMCA in order to carry out several programs using their facilities. Obviously, these facilities' schedules are determined by the Board of Education and the YMCA. These programs include:

- Youth basketball (Middle School)
- Sports Shorts Program (Middle School): program which includes arts and crafts, cultural awareness, and recreational opportunities for toddlers.

- Summertime Special Programs (YMCA): this program includes swimming, arts, crafts, and other recreational opportunities encompassing physical & cultural.

In the years since the previous plan, the following improvements have been made:

- Riverside Gardens Park: recently acquired and planned as passive recreation. Rough grading and seeding of the site has been accomplished with picnic tables and seating located.

- New night lighting has been begun at Count Basie Park, with no scheduled date of completion.

- The tennis courts at Marine Park have been resurfaced and have had new security fencing installed.

- Additional elements of the Borough's "riverwalk" have been committed along the north river areas.

- Plans have begun for a fishing pier at one or two locations on the west river areas. A public boat ramp is also in preliminary planning stages.

Community Facility Improvements

Local & Regional Schools

Since the local school population and the regional school enrollments have changed direction from the 1970's and 1980's, the existing system should be adequate for the short-term need. Additional recreational facilities are needed for both schools. Additional program requirements in future years may require modification and reorganization of the Middle School to better accommodate the teaching methods necessary to those programs.

Broader community use of recreational facilities during off-peak school hours should be encouraged. A policy provision for general community use of educational recreational facilities, should be developed.

Municipal Offices, Police Headquarters, Municipal Court & Senior Citizen Center

As a result of the analysis of these existing buildings and other options available for buildings or sites within the Borough it was concluded that the acquisition of 90 Monmouth Street would best accommodate most of these currently constrained Departments. Additionally, the Borough has undertaken to offer municipal services more readily to the Shrewsbury Avenue area through the construction of a new Municipal Annex at the corner of Shrewsbury Avenue and West Bergen Place. This will provide for various Municipal Services on a rotating schedule basis during the daytime hours of operation. In addition, this facility will provide for a local Police Department presence during evening hours.

The new Senior Citizens Center is currently under construction. It is anticipated to be between 6,000 and 7,000 square feet of program space with on-site parking and water front access for the seniors.

Borough Landfill/Recycling Center

The Borough will continue to use the County landfill facilities and utilize the former Borough landfill for multiple uses, such as a compost or transfer facility, the recycling facility, and future Borough park or recreational facilities. However, it is recommended

that the long range feasibility of the redevelopment of this site should be considered.

Borough Hall & Police Headquarters

Both of these locations are scheduled to be sold as part of the process of relocating Borough Administrative Offices to 90 Monmouth St.

Fire Protection Facilities

Provision of adequate fire protection facilities should be considered in the near future. The existing unreinforced masonry buildings do not meet current nationally recognized standards for fire station design. Existing buildings were designed to house late nineteenth–century equipment which results in the current necessity to choose apparatus with a basis upon building limitations rather than on optimal equipment performance.

The long-range goal should probably be consolidation of fire facilities into two stations, both municipally owned and maintained. Adjacent or consolidated private use facilities for volunteer force administrative and social functions will be required. It is unlikely that future apparatus requirements for the Borough will exceed two ladder, four engine and two or three special use or reserve vehicle. These can be easily accommodated in two facilities. Location of facilities should be selected in consideration of proximity of hazards and ease of access by volunteers. Future facilities should include adequate provisions for administrative activities and joint-training exercises. In addition, these facilities should be designed to meet optimum building requirements especially regarding concerns of seismic and other natural disasters. Locations of these facilities and the type of construction should take into account full coverage of the municipality in the event of one location being disabled.

Parks and Recreational Spaces

While the current facilities are adequate for ongoing programs there has been a desire for increasing programs to accommodate an increase in population across all age categories and activities. The following enhancements to existing parks and recreation facilities should be considered:

- Completion of the night lighting at Count Basie Park
- Improved accommodations for street hockey, which is one of many and growing new activities.
- Additional opportunities for indoor activities, such as volleyball and basketball.
- More and better waterside activity locations. Current programs could be expanded, and new ones such as boating & sailing and water safety could be added. Fishing and boating piers could be built at the ends of certain west side streets, also.
- Completion of Riverwalk between Broad Street, Oyster Point, and - finally - Monmouth Street.

PUBLIC INFRASTRUCTURE PLAN

Significant changes to the water system have occurred since the 1985 Master Plan was adopted. The source of supply, a concern in the previous plan, is no longer a concern. In addition, improvements to the distribution system, many as recommended in the 1985 Master Plan, have improved water service and pressure in the Borough.

The sewer system continues to provide quality service. The Borough continues its commitment to maintain it as necessary.

Water Utility

Source Of Supply

In 1985, the system water source was from two Borough owned wells with water from each well being treated by the associated treatment plant, one at Tower Hill and one at Chestnut Street. The most significant change to the system since 1985 involves a different manner of supply and has resulted in an increase in available water supply. This will enable growth in the Borough over the next 15 years to be supplied with sufficient water.

Since the 1985 Master Plan, NJDEP declared Red Bank, and many other shoreline communities, to be in a "Critical Zone" wherein the aquifers in the zone are subject to saltwater intrusion as a result of high groundwater withdrawal. To protect the aquifer, NJDEP required each community in the Critical Zone to limit well pumpage to one-half of its 1985 pumpage and required all the communities to make other arrangements for the remaining water demand. In answer to the NJDEP requirement, Red Bank entered into an agreement with the New Jersey Water Supply Authority (NJWSA) to provide the additional source of supply needed to meet the required limits on well pumpage. Red Bank continues to use its wells to withdraw groundwater to the permitted amount. NJWSA owns and operates the Manasquan Reservoir system comprised of a 740 acre, four billion gallon reservoir facility in Howell Township, along with a raw water intake structure and raw water transmission pipeline. Red Bank purchases approximately half of its demand from the New Jersey Water Supply Authority during the winter months.

Since the New Jersey Water Supply Authority supplies only raw water, Red Bank also entered into agreement with New Jersey-American Water Co. (NJAWC) to treat and transmit to the Red Bank Distribution System the water purchased by Red Bank from the NJWSA. As a result of these two agreements (one for raw water with NJWSA, and one for treatment and transmission with NJAWC) the source and the amount of supply has been resolved.

There are currently two interconnections between NJAWC and the Red Bank water system by which the purchased water is delivered to the system; the first is on Newman Springs Road at Leighton Avenue, and the second is on Harrison Avenue at Marion Street. Each location has a meter and supplies water and acts as a pressure point to the Red Bank system.

Storage

The existing system storage consists of one 1.5 million gallon ground storage tank. It provides peaking requirements and satisfies the NJDEP requirement to provide 24 hour average day supply during power outage. However, in a worst case condition in which afire occurs during a power outage, there

may not be sufficient water available from the Borough storage system. In this case, supply is to be augmented through the main interconnection with NJAWC.

The Red Bank agreement for water supply with NJAWC provides for this in the event of fire or other catastrophe which threatens the Borough supply.

Treatment

The existing treatment plants continue to operate satisfactorily. The continuation of a maintenance program in which all equipment is maintained and reconditioned throughout its useful life provides acceptable equipment operation. When equipment reaches the end of its useful life, timely replacement is recommended. Equipment replacement should be designed for long life, efficient use of power, and effective use of technology when appropriate.

Distribution System

Substantial improvement, many as recommended in the 1985 Master Plan, have been made to the distribution system since 1985. Table 1 lists the 1985 Master Plan Recommended Water System Improvements and Status as of January 1995. These improvements enable the system to meet domestic and commercial demands. Maintenance of the distribution system continues annually and helps maintain water quality and system serviceability.

Typically, fire flow places the highest demand on the distribution system. A network computer analysis was performed to determine the ability of the system to produce a fire flow of 1,000 gpm with a residual pressure of 20 psi during a peak day condition. There are three areas of the distribution system that do not meet this condition. These areas include:

- northeast section along East Front Street near the Fair Haven border;
- southeast area near the intersection of Branch Avenue and Spring Street;
- southwest area on Bridge Avenue between Drummond Avenue and West Bergen Place.

The recommended improvements necessary for the system to produce acceptable fire flow should be planned for implementation over the next several years. These are:

1. Parallel existing 4" on East Front Street from Caro Court to Haddon Park and on Harrison Avenue from East Front Street to Beekman Pl.;
2. Parallel existing 6" on Branch Avenue from Tower Hill Avenue to Spring Street with 8";
3. Parallel existing 6" on Bridge Avenue from West Bergen Place to Drummond with 8".

With the exception of the Branch Avenue extension, these improvements should be included in the Borough Capital Improvements Program over the next several years. The Branch Avenue extension should be studied in more detail to determine if the NJAWC system interconnection recommended as improvement B2 of Table 1 will produce adequate fire flows.

In addition, there are 4" diameter mains throughout the system. The locations of these 4" mains are identified in Table 2. To bring the system up to NJDEP standards, the mains should be replaced or paralleled. The work can be incorporated into a multi-year capital program. Other significant developments that

Table 1: 1985 Master Plan Improvements, Status as of January, 1995

Improvement #	Description	Estimated cost (1995 $)	Status
	Priority A		
A1	Interconnection with Monmouth Consolidated Water Co. and construction of 12" main on Leighton Ave. from Newman Springs Road to West Bergan Place.	—	COMPLETED
A2	Completion of 12" main on Leighton Ave. and Locust Ave. from West Bergan Place across the railroad to connect with existing system.	$250,000	COMPLETED
A3	Interconnect existing 10" Chestnut to Tower Hill Transmission main with existing system.	$80,000	COMPLETED
A4	Replacement of 4" with 8" on East Front Street between Washington and Spring Street.	$20,000	COMPLETED
	Priority B		
B1	Replacement of undersized mains in northwest portion of the Borough: Bridge, Monmouth, West Front, Rector, Morford and Bodman.	$215,000	PARTIALLY COMPLETED
B2	Interconnection with Monmouth Consolidated Water Co. on Spring Street near Branch and installation of 6" mains.	$40,000	RECOMMENDED
B3	Interconnection Improvement (automatic pressure control valve) @ Marion/Harrison.	$10,000	COMPLETED
B4	Replacement of 4" with 8" main on East Front Street between Caro Court and Harrison Street and between Front Street and Marion.	$70,000	RECOMMENDED
	Priority C		
C1	Installation of 0.5 million (min) elevated storage tank and 12" connection piping to Leighton Ave.	$730,000	NO LONGER NECESSARY
C2	Interconnection with Monmouth Consolidated Water Co. at Route 35/Rumson Pl.	$25,000	NO LONGER NECESSARY
C3	Miscellaneous improvements: Pearl St., Drummond Pl., Waverly Pl., Memorial Park.	$60,000	SOME COMPLETED; REMAINDER RECOMMENDED
TOTAL		$1,500,000	

may occur in the future, and which are in addition to the Vision of this Master Plan, may require other system improvements and should be reviewed at the time those developments are considered at the Planning/Zoning Board level.

Sewer Utility

The capacity, condition, and arrangement of the sewer system of the Borough is generally adequate. There were no major areas of the system which were found to be grossly under capacity for present or anticipated flows. Recommendations with regard to the sewer system can be considered maintenance, repair, and/or replacement activities. Since the 1985 plan, major pump station rehabilitation has been accomplished at the following locations:

1. West Newman Springs Road Lift Station

2. High Street Lift Station

3. Bergen/Tilton Pump Station

Table 2: Replace 4" Lines

Location	Intersections	Length	Cost
Front Street	Washington to Hubbard Park	690	$78,000
Mechanic Street	William to Harrison	2,000	$225,000
Linden Place	Broad to Spring	1,400	$158,000
Worthley	Mechanic to McLaren	400	$45,000
Prospect	Mechanic to McLaren	500	$56,000
Throckmorton	Front to McLaren	800	$90,000
High Street	Front to McLaren	350	$40,000
Rector Place/ Shrewsbury Ave.	Oakland to Bridge Ave.	2,500	$281,000
Arthur Place	Bergan to Irving	750	$84,000
Bergan	South Pearl to Park	520	$59,000
River Street	Shrewsbury to Bridge	400	$45,000
Morford	West Front to Bodman	960	$108,000
Clinton	Newman Springs to Westside	520	$59,000
Clifford	Newman Springs to Westside	520	$59,000
West Front St.	Shrewsbury to Bridge	350	$40,000
Allen	Morford to Riverside	450	$50,000

Stormwater Management Plan

The Borough, in its planning and development requirements, provides that development address stormwater management and comply with the guidelines and regulations of the New Jersey Department of Environmental Protection. The purpose of NJDEP Stormwater Management Regulations are to:

- Offset potential flooding and pinpoint pollution problems;
- encourage water recharge;
- protect the integrity of stream channels;
- reduce soil erosion from new development; and
- protect the adequacy of bridges and culverts.

Natural drainage swales and recharge areas, such as wetlands, wet weather ponds, and similar features are encouraged to be preserved when proven adequate for stormwater management purposes. Red Bank encourages compliance of new development with NJDEP guidelines.

At current development, Red Bank has only a few stormwater problems identified at this time. Generally, pipe sizes, inlets, culverts, and channels are adequate to handle existing generated stormwater flow, with the following exceptions:

- Bridge Avenue at Monmouth Street;
- West Bergen Place between the railroad crossing and Maple Street; and
- Pearl Street at White Street

Plans are underway to provide new construction to resolve the minor flooding at these locations.

CONSERVATION PLAN

Introduction

The Conservation Plan element, in accordance with Municipal Land Use Law, addresses the preservation of natural environments and resources including endangered or threatened species of wildlife, water supply, forested areas, soils, marshes, rivers and other waters, wetlands, harbors and open spaces. In addition to these issues, The Conservation Plan element of the 1995 Red Bank Master Plan also addresses two other planning areas, often treated separately or not considered in municipal master plans: 1) the conservation of energy and of manufactured resources through recycling of recyclable materials, and 2) The preservation of historic sites and historic districts.

The Conservation Plan element must systematically analyze the relationship of all of the other elements of the Master Plan to the present and future preservation, conservation and utilization of borough resources. Therefore, the Conservation Plan element for the Red Bank Master Plan is focused on seven specific areas:

Subsurface conditions
- Geology and Soils
- Contaminated sites
- Relationship to other elements of the Master Plan

Surface water: the rivers and Mohawk Pond
- Assessment
- Relationship to relevant elements of the Master Plan

Wetlands
- Definition
- Locations
- Assessment
- Relationship to other elements of the Master Plan

Water supply hydrology: the wells and the aquifers
- Sources
- Assessment
- Relationship to relevant elements of the Master Plan

Recycling plan
- Statewide goals for recycling and waste management
- Red Bank's recycling program

Historic preservation plan
- Identification of historic sites
- Resource organizations for historic preservation
- Relationship to relevant elements of the Master Plan

Coordination with adjacent municipalities, state and regional agencies and community organizations
- State and Federal agencies
- Regional organizations
- Area municipalities
- Red Bank agencies and community organizations

Subsurface Conditions

Geology and Soils

The Environmental Resource Inventory[1] provides a technically detailed description of the subsurface conditions and soils beneath the upland areas. The documentation revels several ways that this knowledge should inform planning in the borough.

First, certain soils will become saturated and tend to "flow" more readily than others and the borough should anticipate that developers will encounter special conditions when considering certain sites (e.g.: along Newman Springs Road, as indicated by the presence of Holmdel Sandy Loam near the south end of Broad Street and near the south end of Leighton Avenue).

Second, the sandy soils present a high erosion hazard in the steep slope areas along the river.

Third, the delineation of the tidal and floodplain soils (Hemaquepts and the sulfaquents/sulfihemists) indicate the presence of wetlands where development entails more costly structure and more exacting regulation, and will therefore influence future plans for development along the riverfront.

These qualities do not necessarily have a direct influence on zoning designations; however, one will find a general correlation. Traditionally, new construction is sited on high, dry, fairly level ground. Also, in some cases there are specific prohibitions and modifying regulations that apply to specific types of environments.

Contaminated Sites

Man-made and naturally occurring toxic materials may be a concern at certain locations in the borough. For example, the Monmouth County Waste Sites Map notes the location of the inactive incinerator and landfill at the end of Sunset Avenue, and several monitoring wells are presently monitoring the site to ensure that there is no potential for contamination of the surrounding area.

Surface water: the rivers and Mohawk Pond

Assessment

The Navesink River, the Swimming River and Mohawk Pond each have distinctive environments and are each impacted by human activities in different ways. Recently, for example, the ban on commercial shellfishing on the Navesink River (imposed in the early 60's) was lifted. A primary cause of ban was eliminated in the 1970's when the small wastewater treatment plants that emptied directly into the Navesink were closed; and continued controls and monitoring have dramatically lowered the presence of non-point source pollutants, such as fertilizers, pesticides, herbicides and animal wastes.

Delicate marshland ecology like that of the Swimming River has come increasingly under state environmental protection. The borough was successful in having the river from Oyster Point to the Swimming River Dam declared an Environmentally Sensitive Area.

Mohawk Pond is primarily fed by municipal stormwater outfalls, therefore it is especially important to control stormwater pollution

through Best Management Practices, as noted in the Environmental Resource Inventory. The New Jersey Department of Environmental Protection: Division of Coastal Resources designates special areas which necessitate special management policies[2]. For Red Bank these areas could include: submerged vegetation, navigation channels, Marina moorings, filled waters edges, shellfish beds, prime fishing areas, fish migratory pathways, natural waters edges, floodplains[3], wetlands, wetlands buffer, intermittent stream corridor, historic and archeological resources, and public open space.

Relationship to other elements of the Master Plan

New construction that is anticipated at several locations along the riverfront will impact some of the New Jersey Department of Environmental Protection (NJDEP) designated "special areas" and come within the purview of several regulatory departments and agencies. The subject of special reviews administered by NJDEP include *excavation or construction on coastal wetlands* - (Wetlands Permit); *construction on any tidal or navigable waterway* - (Waterfront Development Permit) and *construction of major residential, industrial, transportation (including structured parking), utility or energy related facilities* - (Coastal Area Facility Review Act "CAFRA" Permit).

In most cases the NJDEP welcomes the opportunity for preliminary review early in the design process. Additional Federal review of proposed or substantially renovated bulkheads, breakwaters, docks, or piers in navigable waters is administered by the Army Corps of Engineers.

The necessity to protect the ecologically delicate nature of the riverfront environments need not compete with the natural human urge to be close to the water. Nationwide, the increased interest in marine and riverfront oriented public recreation has elevated public awareness of conservation issues. Plans to build a civic open space to connect Red Bank's downtown to sweeping views of the Navesink and construct a pedestrian walkway "Riverwalk" along the river's edge are central to the future of the community and its identity in the region.

Increased accessibility to the western riverfront as new residential development occurs is an essential element of the revitalization envisioned for the West Side neighborhoods. This should happen by the provision of public access at the ends of the east-west streets.

Wetlands

Definition

By definition, a "wetland" is: *an area that is inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions, commonly known as hydro-trophic vegetation.*[4]

Locations

The actual perimeter of the wetland boundary at a specific site is to be delineated in accordance with the USEPA three parameter approach (hydrology, soils and vegetation). In Red Bank the extent of wetland environments is indicated generally by the presence

of soils found in the floodplain and tidal areas (Humaquepts and Sulfaquents) as documented in Figure 4 of The Environmental Resource Inventory (Phase One)[5].

Assessment

In general, the areas occupied by these soils are used for wildlife habitat and recreation associated with riverfront activities such as marinas, docks and fishing piers. Thoughtful regulation and voluntary emphasis on conservation has reduced the negative impact that these facilities will have on Red Bank's wetlands. For additional information on the nature and mapping of wetland areas see the Environmental Resource Inventory recently completed by the Red Bank Environmental Commission.

Water supply hydrology: the wells and the aquifers

Sources

Historically, groundwater has been generally abundant in most of Monmouth County. However, increased development in the 1980's resulted in a larger quantity of water being withdrawn causing partial depletion and some salt-water intrusion of the underlying aquifers. As a result, Monmouth County has been classified Critical Area #1 in New Jersey by the NJDEP.

Assessment

Conservation measures included a requirement that all communities in the Critical Area reduce well pumpage by 50%. Red Bank now obtains its municipal water supply from the Manasquan Reservoir for six months a year. Red Bank presently maintains a 1.5 million gallon ground storage tank for fire flow and daily supply. The borough also has interconnections with New Jersey American Water Company for backup supply if necessary. The water supply and water treatment plants are presently in satisfactory operating condition.
Relationship to other elements of the Master Plan

The previous Master Plan noted that the yield capacity of the natural aquifers established a natural upper limit of the borough's population. Since that time, alternative water sources have become available, as noted above. The 1995 Master Plan develops an upper population limit based on land use and design criteria in the Housing Plan Element.

Recycling plan

Statewide goals for recycling and waste management

The State Recycling Plan goal is to recycle 60% of the solid waste stream by January 1, 1996. The plan includes provisions for the collection, disposition, and recycling of recyclable materials designated in the municipal recycling ordinance, and Municipal Land Use Law requires that a specific plan be developed for the recycling of recyclable materials from any development proposal for the construction of 50 or more units of single family residential housing or 25 or more units of multi-family residential housing and any commercial development proposal for 1,000 square feet or more of land [N.J.S.A. 40:55d-28(12)]. The residential projects planned for Red Bank to have approved design occupancies at these levels will be provided with the same recycling services as other residential neighborhoods. It is recommended however, that the borough's site plan ordinance and the

development regulations be amended to comply with these Municipal Land Use Law requirements pursuant to N.J.S.A. 40:55d-28(12).

Red Bank's recycling program

The borough has begun curbside collection of plastics, metal, and glass and manages a collection site for mixed paper. The Red Bank recycling center is currently located at the Public Works building at 75 Chestnut Street. This site handles all Class A recyclables. In addition, an expanded borough-operated recycling facility will be constructed at the site of the obsolete Red Bank Landfill. The center will receive all Class A materials (which includes glass, cardboard, paper, metal cans, and plastics). Recycling of plant debris (fall leaves) will continue to occur at the landfill site, where residents may take autumn leaves from their properties and pick up mulch for their gardens and planted areas.

Recyclables from businesses, restaurants, industrial and institutional establishments are required to be separated and are collected on the same schedule as residential pick-up.

Because Red Bank is a diverse, compact community, where varied land uses co-exist in close proximity. This provides many opportunities for re-utilization as well as making curbside pick-up of recyclable materials efficient and economical.

Historic Preservation Plan

Identification of historic sites

Red Bank has been a center of shipping and commerce for centuries. As documented in the Environmental Resource Inventory, the borough has significant architec-tural and historic resources that include historic sites and districts that date from the late seventeenth century to approximately 1930. The Environmental Resource Inventory provides a compilation of notable buildings, districts, and structures which are significant and representative of Red Bank's history, culture and architecture.

The Downtown Design Overlay District, (the historic district) includes about eighty (80) buildings with frontage on Broad Street between Front and Linden streets or on Front Street between English Plaza and Globe Court. It is recommended that the Historic District Regulations, adopted in 1985, be refined and up-dated to provide clear criteria for evaluation of future development and restoration proposals.

Resource organizations for historic preservation

Local organizations that are involved with preservation and adaptive reuse of culturally significant sites in Red Bank are:

- Red Bank Environmental Commission
- Office of New Jersey Heritage, Monmouth county Park System
- River Center Visual Improvement Committee (VIC)

Relationship to other elements of the Master Plan

A fundamental theme of all previous planning efforts in Red Bank has been the challenge of adapting the structure and form of a town built largely in the 19th century to the requirements of 21st century commerce and market expectations. From the 1930's forward, borough master plans focus on reshaping the downtown area to separate

uses and simplify automobile access. The 1995 Land Use Plan and Housing Plan elements place greater emphasis on encouraging mixed use and downtown living that will lead to redevelopment and adaptive reuse of Red Bank's older buildings.

Coordination with adjacent municipalities, state and regional agencies and community organizations

Resource Recovery

Adjacent municipalities: Non-recyclable solid waste will continue to be taken to the Monmouth County Landfill.

Monmouth County Planning Board: In addition to administering the county's responsibilities for the statewide solid waste plan, the Monmouth County Planning Board offers technical assistance to municipal collection processing programs. It also operates an extensive education program that includes several publications, workshops in the schools and resource materials for educators.

State and Federal agencies: As an incentive for municipal governments to participate in a recycling program, the State offers tonnage grant awards. The amount of money refunded to a municipality is directly related to the success of their recycling program. In 1987, the New Jersey Mandatory Source Separation and Recycling Act set a goal for all municipalities for recycling of 25% of the municipal solid waste stream within two years of the programs implementation.

In 1992 the Governor's Solid Waste Task Force revised this benchmark in order to halt the expensive practice of transferring solid waste out of the state. The recycling goal was separated into two parts; *municipal* (which refers to materials from curbside pick-up from households) and *total* (which includes materials that are not usually collected on the regular weekly pick-up days such as scrap metal, leaves, mixed paper, industrial debris, and large items. A target was established to recycle (by weight) 50% of the municipal solid waste stream and 60% of total solid waste by 1995.

In 1994 recycling for all of Monmouth County has nearly accomplished the state benchmark: 46.5% of municipal solid waste and 52.4% of the total solid waste stream is recycled.

The corresponding figures for Red Bank (17% for the municipal waste stream and 60% of total solid waste) is indicative of the more diverse social and economic structure of a town as compared to the suburban and rural areas of the county. The presence of a thriving commercial scrap metal recycling company in Red Bank is certainly partially responsible for the high percentage of the total solid waste tonnage that is recycled.

The relatively low percentage (by weight) of all materials collected at curbside that are recycled is probably due to four factors; first, mixed paper is not currently economical for the borough to pick up at curbside; second, because the Chestnut Street facility is soon to be replaced by a new facility with much-needed expanded capacity, the separation of solid waste is not yet rigorously enforced. Third, the commercial and business community generate a significant amount (by weight) of mixed paper (recyclable, but not collected) and food waste (could be composted, but also not collected at curbside). Lastly, and as mentioned previously, because Red Bank is a

diverse, compact community, varied land uses co-exist in close proximity. This provides many opportunities for re-utilization by neighbors and other resourceful people of items that would otherwise become part of the solid waste stream. Therefore, a greater percentage of the overall weight of collected municipal waste is non-recyclable.

Environmental Protection

State and Federal agencies: As the borough begins to implement the plans for riverfront redevelopment along the Navesink the continued participation of various State and Federal regulatory agencies will be essential to sustain conditions conducive for development, avoiding unnecessary delays and duplication of effort.

Long-standing bans on shellfishing along the Navesink are an indication of the combined diligent efforts of the individual citizens, the borough, various regional organizations, and the state. The continued monitoring of pollutant levels will encourage further improvement in the quality of local waterways making Red Bank's rivers more hospitable for both wildlife and recreation. Ongoing activities of state/borough collaboration include contamination mitigation of the old landfill and the Clean Shores Program. Through the Clean Shores Program the municipal clean-up of the Navesink River banks is assisted twice yearly by state prison inmates.

Regional and Community Organizations: The Navesink River Municipalities Commission consists of three representatives from each of the communities of Red Bank, Fair Haven, Rumson, Middleton, Colt's Neck, and Tinton Falls. The committee monitors quarterly water quality testing and regular dredging operations (near-term objectives for dredging are to keep navigable channels clear to Marina at Maple Street and Chris's Landing) Another environmental objective is to make the Navesink a "no discharge zone" where boats are required to empty on-board sewage at a dumping station that will be provided at each of the principle launch sites.

Historic Preservation

State and Federal agencies: In addition to the state program for designation of historic places The Office of New Jersey Heritage maintains extensive records and other information related to area sites of cultural significance. Some of this material has been included in the Environmental Resource Inventory, Including the location of many Red Bank historical buildings.

The state legislature is in the process of implementing the provisions of Article 34 of the BOCA National Code into the New Jersey Uniform Building Code. Once in place, this will remove some of the regulatory impediments to redevelopment of older buildings and should have a positive influence on the economic pro forma for restoration and adaptive reuse projects downtown.

Community Organizations: The facade improvement program administered by River Center continues to be an effective way to encourage property owners to maintain and improve buildings in a way that contributes to the character of the downtown area. Though the guidelines for the Design District Overlay provide a useful reference, they need to be updated regularly in order to assist decision-making regarding color, materials, graphic quality and lighting in the historic commercial core of Red Bank.

NOTES

1 The Environmental Resource Inventory, The Red Bank Environmental Commission, prepared by T&M Associates, 1994-1995

2 Rules on Coastal Zone Management (N.J.A.C.-7:7E-1.1 to 3.40)

3 Defined by the Flood Hazard Area Control Act (N.J.S.A.-58:16A-50) or by the Federal Emergency Management Agency (FEMA) flood insurance regulation maps.

4 Rules on Coastal Zone Management N.J.A.C. 7L7E. As amended July 18, 1994. Department of Environmental Protection. Land use Regulation Program.

5 The Environmental Resource Inventory, The Red Bank Environmental Commission, prepared by T&M Associates, 1994-1995